

co-ordinated with the Director of the Institute / Head of Department

Institute/ Independent Department / Clinical Co-operation Group / Junior Research Group:

Institute of Health Economics and Health Care Management

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Title of the Highlight:

Validity, Reliability, and Responsiveness of the EQ-5D in Inflammatory Bowel Disease in Germany

Keywords:

health-related quality of life, inflammatory bowel disease, EQ-5D

Central statement of the Highlight in one sentence:

The Euroqol 5D questionnaire is a valid and reliable measure of health related quality of life in patients with Crohn's disease and Ulcerative Colitis and showed a reduction in health related quality of life when disease severity increased.

Text of the Highlight:

The EuroQol (EQ)-5D questionnaire measures the overall impact of diseases on an individual's health-related quality of life. It includes five questions regarding problems with 'mobility', 'self-care', 'usual activities', 'pain/discomfort', and 'anxiety/depression' and a visual analogue scale (EQ VAS) to rate health state between 0 (worst) and 100 (best). An index score (EQ-index) can be calculated based on the 5 questions. The questionnaire's validity, reliability, and responsiveness were assessed in a large sample of patients with Crohn's disease and ulcerative colitis, together known as Inflammatory Bowel Diseases (IBD). These patients have symptoms such as diarrhoea, abdominal pain and gastrointestinal bleeding which may considerably affect their quality of life.

The questionnaire was completed at baseline by 502 (270 CD and 232 UC) patients recruited from the German IBD association (DCCV) and after 4 weeks (447 patients) with a transition question rating health change. Responsiveness of EQ visual analog scale (EQ-VAS) and the EQ-index scores to reported changes in health was evaluated by standardized response means and meaningful differences.

EQ-VAS and EQ-index scores correlated well with disease activity indices and differed significantly between active disease and remission groups. All scores were reliable in test–retest. EQ-VAS was more responsive for deterioration in health than for improvement in health and was more responsive than index scores. There were significant meaningful differences for patients reporting improved health and for those reporting deteriorated health. Meaningful differences of EQ-VAS also differed significantly according to disease activity.

The Euroqol EQ-5D generates valid, reliable, and responsive preference-based valuations of health in CD and UC. EQ-VAS scores were more responsive than EQ-5D index scores. Since the EQ-index reflects population preferences, which are important in coverage and reimbursement decisions regarding new health technologies it is of concern that small health differences that are important from the patient’s perspective may not be reflected in the EQ-index.

Publication:

Stark, R.G., Reitmeir, P., Leidl, R., König, H.H.: Validity, Reliability, and Responsiveness of the EQ-5D in Inflammatory Bowel Disease in Germany. *Inflammatory Bowel Diseases* 16, 42-51 (2010)

Taking account of the HMGU mission:

HMGU mission: Chronic diseases are the central focus of research performed in the Helmholtz Zentrum and the burden of such diseases on the patient and their overall health related quality of life can be evaluated with the Euroqol 5D questionnaire. Not only can this questionnaire be used to compare treatments between patients with the same disease, it can also be used to compare the effect of interventions on overall health related quality of life between patients with different underlying chronic diseases. Thus, the Euroqol is an important tool for the evaluation of both active treatments and preventative care.

The internal HMGU co-operation partners with whom the Highlight was compiled, if appropriate:

Background Information

- The Euroqol EQ-5D questionnaire measures the overall impact of diseases on health-related quality of life
- It includes five questions regarding problems with 'mobility', 'self-care', 'usual activities', 'pain/discomfort', and 'anxiety/depression' and a visual analogue scale (VAS) to rate health state between 0 (worst) and 100 (best).
- The EQ-5D index score, based on the 5 questions, reflects the general population's valuation of the health state while the EQ visual analogue scale score is a subject's valuation of their own health state.
- Inflammatory Bowel Diseases are chronic diseases which lead to diarrhea, abdominal pain and gastrointestinal bleeding requiring surgical and medical treatments
- They include Crohn's disease and Ulcerative Colitis.

Goal:

- To assess the Euroqol questionnaire in a large sample of patients with Inflammatory Bowel Disease in Germany

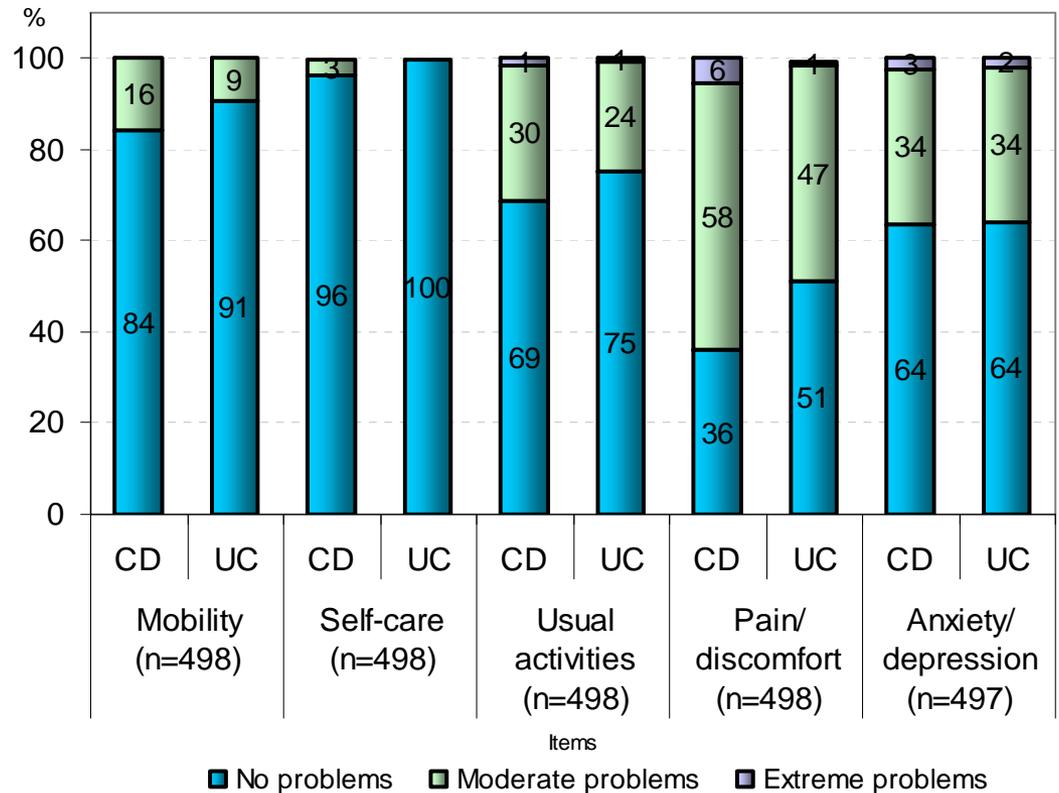
Responses to the Dimension-Questions of the Euroqol 5D by Patients with Inflammatory Bowel Disease in Germany

IGM

Results

Distribution of responses to the EQ-5D descriptive system for CD (Crohn's disease) and UC (ulcerative colitis) subjects at baseline.

A majority of patients have problems with pain and discomfort. Problems with anxiety/depression and usual activities were also frequent.

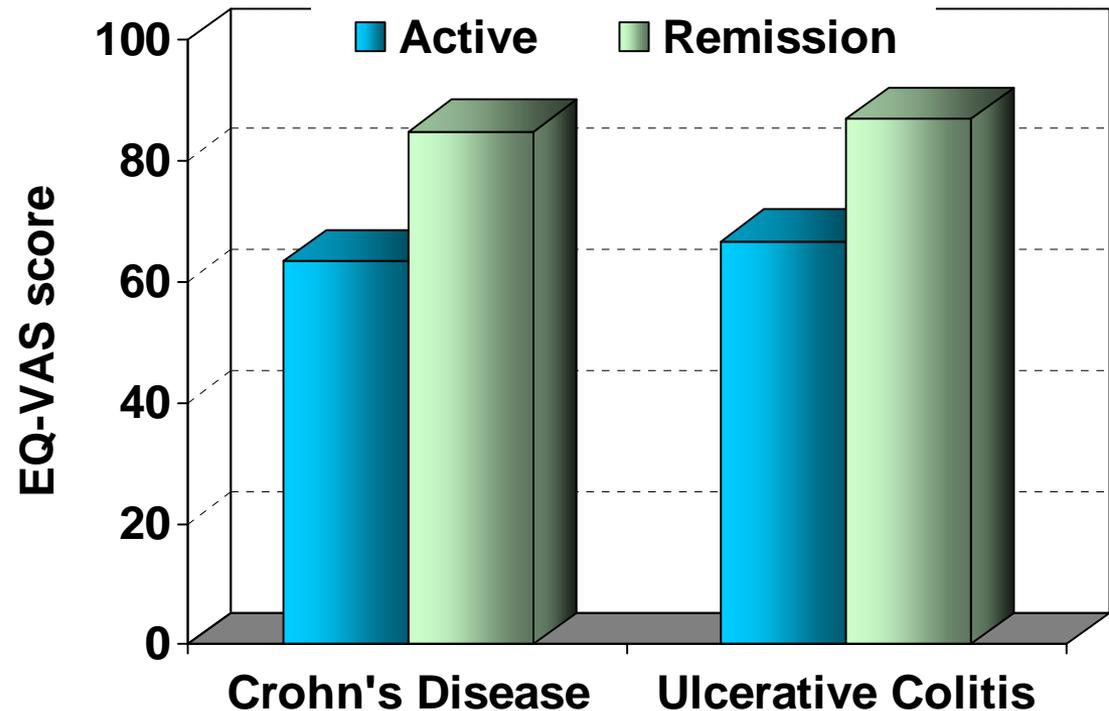


Differences in Euroqol EQ-VAS scores between patients with active Inflammatory Bowel Disease and those in remission

IGM

Results

The diagram shows that disease activity has a high impact on the overall health status as seen from the point of view of patients



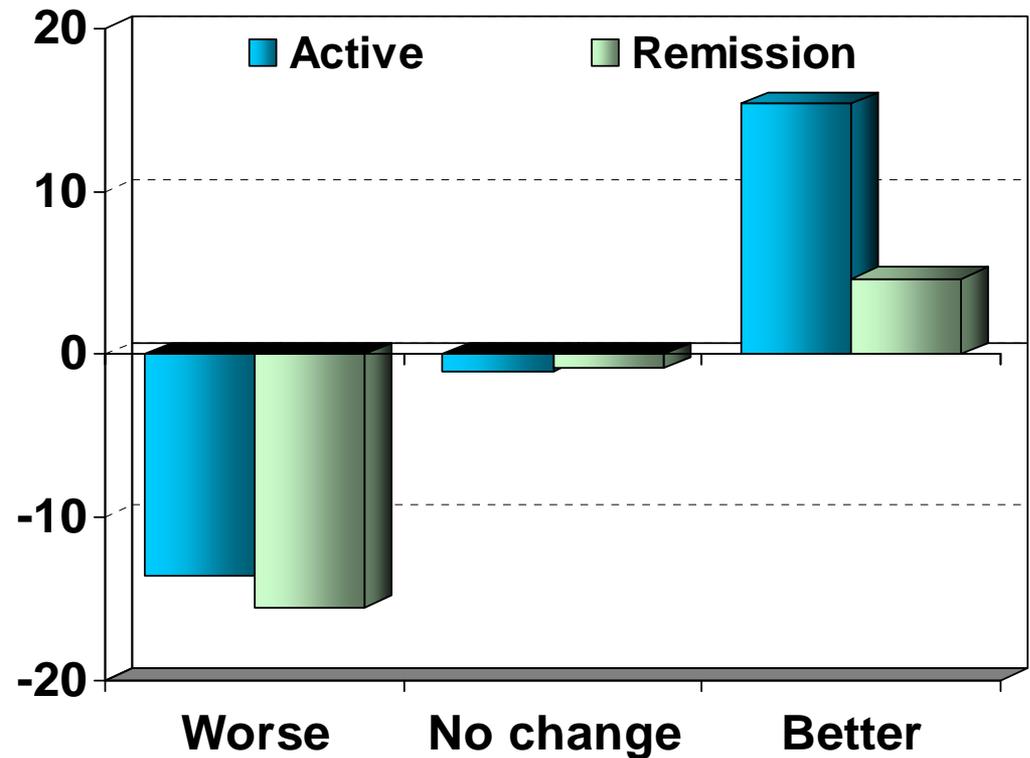
Average meaningful differences of the EQ-VAS adjusted for disease activity in patients with Inflammatory Bowel Disease

IGM

Results

The change in EQ-VAS scores was significant for both improved and declined health status.

The absolute change in EQ-VAS for deteriorated and improved health was similar for patients with active disease. Patients in remission who reported improved health had less absolute change in EQ VAS.



Conclusions

- The Euroqol EQ-5D generates valid, reliable, and responsive preference-based valuations of health in Crohn's disease and Ulcerative Colitis.
- EQ-VAS scores were more responsive than EQ-5D index scores.
- Since the Euroqol questionnaire offers options to measure both population and individual preferences, it could be an important tool for the evaluation of both active treatments and preventative care of chronic diseases, which are the central focus of research performed in the Helmholtz Zentrum